

WHAT IS CLAIMED IS:

1. A method for resource capacity collaboration, comprising:
 - accessing an assignment of an item used in producing a product for a customer to a first resource of a factory in a first production period;
 - 5 accessing a capacity value representing a capacity of the first resource to process one or more items in the first production period;
 - accessing a demand value representing a demand placed on the first resource in the first production period by the assignment of the item to the first resource;
 - 10 automatically generating a notification if the demand value exceeds the capacity value;
 - automatically communicating the notification to a user associated with the customer; and
 - reassigning at least a portion of the demand placed on the first resource in the first production period to at least one of a second resource and a second production period.
2. The method of Claim 1, wherein reassigning at least a portion of the demand comprises allowing the user associated with the customer to reassign at least a portion of the demand.
- 20 3. The method of Claim 2, wherein:
 - the notification is also automatically communicated to at least one of a user associated with the factory and a user associated with a supplier;
 - 25 the reassignment is initiated by at least one of the user associated with the factory and the user associated with the supplier, respectively;
 - the reassignment is to a second resource in the same factory if initiated by the user associated with the factory; and
 - the reassignment is to a second resource in another factory if initiated by the user associated with the supplier.

4. The method of Claim 3, further comprising allowing the user associated with the customer to reassign at least a portion of the demand to another supplier if a reassignment by the user associated with the factory and a reassignment by the user associated with the supplier would both fail to resolve a demand-capacity mismatch associated with the assignment of the item to the first resource.

5 5. The method of Claim 1, wherein the demand value reflects a factoring value associated with processing the item using the first resource, the demand value equaling the factoring value multiplied by a nominal demand value representing a 10 demand that would be placed on the first resource in processing a standard item.

15 6. The method of Claim 1, further comprising:
storing a requested capacity value representing a capacity of the first resource requested by the customer;
storing a committed capacity value representing a capacity of the first resource that at least one of a user associated with the factory and a user associated with a supplier agrees to provide the customer; and
generating a notification when the requested capacity value is different than the committed capacity value.

20 7. The method of Claim 6, further comprising:
storing a contracted capacity value representing a maximum capacity of the first resource that the customer is allowed to request; and
generating a notification when the requested capacity value exceeds the 25 contracted capacity value.

8. The method of Claim 1, further comprising:
storing an estimated capacity value representing an estimated capacity of the resource made by the customer; and
generating a notification when the capacity value is different than the 30 estimated capacity value.

9. The method of Claim 1, further comprising generating a notification when the capacity value exceeds the demand value.

10. The method of Claim 1, wherein the first and second resources are
5 associated with different factories.

11. The method of Claim 1, wherein the first and second resources are associated with different suppliers.

10 12. The method of Claim 1, further comprising:
storing at least one access privilege; and
making the assignment, the capacity value, the demand value, and the notification available to a user associated with at least one of the customer, the factory, and a supplier based on the access privilege.

15 13. The method of Claim 1, wherein at least one additional resource is associated with the factory, the additional resource operable to receive and process a second item from the first resource, the method further comprising:

20 storing a demand value associated with the additional resource, the demand value for the additional resource based at least partially on the demand value for the first resource; and

propagating a change in the demand value for the first resource to the demand value for the additional resource, the change in the demand value for the first resource resulting in a change in the demand value for the additional resource.

25 14. The method of Claim 13, further comprising providing a tree structure to the user in a display, the tree structure comprising the first resource, the additional resource, and at least the demand values for the first resource and additional resource.

15. Software for resource capacity collaboration, the software embodied in at least one computer-readable medium and when executed operable to:

accessing an assignment of an item used in producing a product for a customer to a first resource of a factory in a first production period;

5 accessing a capacity value representing a capacity of the first resource to process one or more items in the first production period;

accessing a demand value representing a demand placed on the first resource in the first production period by the assignment of the item to the first resource;

10 automatically generating a notification if the demand value exceeds the capacity value;

automatically communicating the notification to a user associated with the customer; and

reassigning at least a portion of the demand placed on the first resource in the first production period to at least one of a second resource and a second production

15 period.

16. The software of Claim 15, wherein the software is operable to allow the user associated with the customer to reassign at least a portion of the demand value.

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17. The software of Claim 16, further operable to:

automatically communicate the notification to at least one of a user associated with the factory and a user associated with a supplier; and

25 allow at least one of the user associated with the factory and the user associated with the supplier, respectively, to reassign at least a portion of the demand value to a second resource in the same factory or a second resource in another factory, respectively.

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18. The software of Claim 17, operable to allow the user associated with the customer to reassign at least a portion of the demand to another supplier if a reassignment by the user associated with the factory and a reassignment by the user associated with the supplier would both fail to resolve a demand-capacity mismatch
5 associated with the assignment of the item to the first resource.

19. The software of Claim 15, wherein the demand value reflects a factoring value associated with processing the item using the first resource, the demand value equaling the factoring value multiplied by a nominal demand value
10 representing a demand that would be placed on the first resource in processing a standard item.

20. The software of Claim 15, further operable to:
store a requested capacity value representing a capacity of the first resource
15 requested by the customer;
store a committed capacity value representing a capacity of the first resource that at least one of a user associated with the factory and a user associated with a supplier agrees to provide the customer; and
generate a notification when the requested capacity value is different than the
20 committed capacity value.

21. The software of Claim 20, further operable to:
store a contracted capacity value representing a maximum capacity of the first resource that the customer is allowed to request; and
25 generate a notification when the requested capacity value exceeds the contracted capacity value.

22. The software of Claim 15, further operable to:
store an estimated capacity value representing an estimated capacity of the
30 resource made by the customer; and
generate a notification when the capacity value is different than the estimated capacity value.

23. The software of Claim 15, further operable to generate a notification when the capacity value exceeds the demand value.

24. The software of Claim 15, wherein the first and second resources are
5 associated with different factories.

25. The software of Claim 15, wherein the first and second resources are associated with different suppliers

10 26. The software of Claim 15, further operable to:
store at least one access privilege; and
make the assignment, the capacity value, the demand value, and the notification available to a user associated with one of the customer, the factory, and the supplier based on the access privilege.

15 27. The software of Claim 15, wherein:
at least one additional resource is associated with the factory, the additional resource operable to receive and process a second item from the first resource; and
the software is further operable to:

20 store a demand value associated with the additional resource, the demand value for the additional resource based at least partially on the demand value for the first resource; and
propagate a change in the demand value for the first resource to the demand value for the additional resource, the change in the demand value for the first
25 resource resulting in a change in the demand value for the additional resource.

28. The software of Claim 27, further operable to provide a tree structure to the user in a display, the tree structure comprising the first resource, the additional resource, and at least the demand values for the first resource and additional resource.

29. A system for resource capacity collaboration, comprising:
a memory operable to store:
an assignment of an item used in producing a product for a customer to
a first resource of a factory in a first production period;
5 a capacity value representing a capacity of the first resource to process
one or more items in the first production period;
a demand value representing a demand placed on the first resource in
the first production period by the assignment of the item to the first resource;
one or more processors collectively operable to:
10 automatically generate a notification if the demand value exceeds the
capacity value;
automatically communicate the notification to a user associated with
the customer; and
reassign at least a portion of the demand placed on the first resource in
15 the first production period to at least one of a second resource and a second
production period.

30. The system of Claim 29, wherein the processors are operable to allow
the user associated with the customer to reassign at least a portion of the demand
20 value.

31. The system of Claim 30, wherein the processors are further operable
to:
automatically communicate the notification to at least one of a user associated
25 with the factory and a user associated with a supplier; and
allow at least one of the user associated with the factory and the user
associated with the supplier, respectively, to reassign at least a portion of the demand
value to a second resource in the same factory or a second resource in another factory,
respectively.

32. The system of Claim 31, wherein the processors are operable to allow the user associated with the customer to reassign at least a portion of the demand to another supplier if a reassignment by the user associated with the factory and a reassignment by the user associated with the supplier would both fail to resolve a
5 demand-capacity mismatch associated with the assignment of the item to the first resource.

33. The system of Claim 29, wherein the demand value reflects a factoring value associated with processing the item using the first resource, the demand value
10 equaling the factoring value multiplied by a nominal demand value representing a demand that would be placed on the first resource in processing a standard item.

34. The system of Claim 29, wherein:
the memory is further operable to:
15 store a requested capacity value representing a capacity of the first resource requested by the customer; and
store a committed capacity value representing a capacity of the first resource that at least one of a user associated with the factory and a user associated with a supplier agrees to provide the customer; and
20 the processors are further operable to generate a notification when the requested capacity value is different than the committed capacity value.

35. The system of Claim 34, wherein:
the memory is further operable to store a contracted capacity value
25 representing a maximum capacity of the first resource that the customer is allowed to request; and
the processors are further operable to generate a notification when the requested capacity value exceeds the contracted capacity value.

36. The system of Claim 29, wherein:

the memory is further operable to store an estimated capacity value representing an estimated capacity of the resource made by the customer; and

the processors are further operable to generate a notification when the capacity

5 value is different than the estimated capacity value.

37. The system of Claim 29, wherein the processors are further operable to generate a notification when the capacity value exceeds the demand value.

10 38. The system of Claim 29, wherein the first and second resources are associated with different factories.

39. The system of Claim 29, wherein the first and second resources are associated with different suppliers

15 40. The system of Claim 29, wherein:

the memory is further operable to store at least one access privilege; and

the processors are further operable to make the assignment, the capacity value, the demand value, and the notification available to a user associated with one of the customer, the factory, and the supplier based on the access privilege.

20 41. The system of Claim 29, wherein:
at least one additional resource is associated with the factory, the additional resource operable to receive and process a second item from the first resource;

25 the memory is further operable to store a demand value associated with the additional resource, the demand value for the additional resource based at least partially on the demand value for the first resource; and

30 the processors are further operable to propagate a change in the demand value for the first resource to the demand value for the additional resource, the change in the demand value for the first resource resulting in a change in the demand value for the additional resource.

42. The system of Claim 41, wherein the processor is further operable to provide a tree structure to the user in a display, the tree structure comprising the first resource, the additional resource, and at least the demand values for the first resource and additional resource.

43. A method for resource capacity collaboration, comprising:

accessing an assignment of a particular item used in producing a product for a particular customer to a particular first resource of a particular factory associated with a particular supplier in a first production period, the first resource operable to perform at least one processing step involving the particular item;

5 accessing a capacity value representing a capacity of the first resource to process one or more items in the first production period;

accessing a demand value representing a demand placed on the first resource in the first production period by the assignment of the particular item to the first resource;

10 if a demand-capacity mismatch exists with respect to the first resource in that the demand value exceeds the capacity value, automatically generating a notification in response to the demand-capacity mismatch;

automatically communicating the notification to a user associated with the factory, a user associated with the supplier, and a user associated with the customer;

15 allowing the user associated with the factory to reassign at least a portion of the demand to at least one of a second resource of the same factory and a second production period to attempt to resolve the demand-capacity mismatch;

if the demand-capacity mismatch cannot be fully resolved as a result of 20 reassignment by the user associated with the factory, allowing the user associated with the supplier to reassign at least a portion of the demand to another factory also associated with the supplier to attempt to resolve the demand-capacity mismatch; and

25 if the demand-capacity mismatch cannot be fully resolved as a result of reassignment by the user associated with the supplier, allowing the user associated with the customer to reassign at least a portion of the demand to another supplier to attempt to resolve the demand-capacity mismatch.

44. Software for resource capacity collaboration, the software being embodied in at least one computer-readable medium and when executed operable to:

- access an assignment of a particular item used in producing a product for a particular customer to a particular first resource of a particular factory associated with a particular supplier in a first production period, the first resource operable to perform at least one processing step involving the particular item;
- access a capacity value representing a capacity of the first resource to process one or more items in the first production period;
- access a demand value representing a demand placed on the first resource in the first production period by the assignment of the particular item to the first resource;
- if a demand-capacity mismatch exists with respect to the first resource in that the demand value exceeds the capacity value, automatically generate a notification in response to the demand-capacity mismatch;
- automatically communicate the notification to a user associated with the factory, a user associated with the supplier, and a user associated with the customer;
- allow the user associated with the factory to reassign at least a portion of the demand to at least one of a second resource of the same factory and a second production period to attempt to resolve the demand-capacity mismatch;
- if the demand-capacity mismatch cannot be fully resolved as a result of reassignment by the user associated with the factory, allow the user associated with the supplier to reassign at least a portion of the demand to another factory also associated with the supplier to attempt to resolve the demand-capacity mismatch; and
- if the demand-capacity mismatch cannot be fully resolved as a result of reassignment by the user associated with the supplier, allow the user associated with the customer to reassign at least a portion of the demand to another supplier to attempt to resolve the demand-capacity mismatch.

45. A system for resource capacity collaboration, comprising:

a memory operable to store:

an assignment of a particular item used in producing a product for a particular customer to a particular first resource of a particular factory associated with a particular supplier in a first production period, the first resource operable to perform at least one processing step involving the particular item;

5 a capacity value representing a capacity of the first resource to process one or more items in the first production period;

a demand value representing a demand placed on the first resource in

10 the first production period by the assignment of the particular item to the first resource;

one or more processors collectively operable to:

if a demand-capacity mismatch exists with respect to the first resource in that the demand value exceeds the capacity value, automatically generate a

15 notification in response to the demand-capacity mismatch;

automatically communicate the notification to a user associated with the factory, a user associated with the supplier, and a user associated with the customer;

allow the user associated with the factory to reassign at least a portion

20 of the demand to at least one of a second resource of the same factory and a second production period to attempt to resolve the demand-capacity mismatch;

if the demand-capacity mismatch cannot be fully resolved as a result of reassignment by the user associated with the factory, allow the user associated with the supplier to reassign at least a portion of the demand to another factory also

25 associated with the supplier to attempt to resolve the demand-capacity mismatch; and

if the demand-capacity mismatch cannot be fully resolved as a result of reassignment by the user associated with the supplier, allow the user associated with the customer to reassign at least a portion of the demand to another supplier to attempt to resolve the demand-capacity mismatch.

46. A method for resource capacity collaboration, comprising:

accessing an estimated capacity value representing a customer-estimated capacity of a first resource of a factory used in producing a product for the customer, the first resource operable to perform at least one processing step in producing the product;

5 accessing a contracted capacity value representing a maximum capacity of the first resource that the customer is allowed to request;

accessing a requested capacity value representing a capacity of the first resource requested by the customer to be used in producing the product for the customer;

10 accessing a committed capacity value representing a capacity of the first resource that at least one of a user associated with the factory and a user associated with a supplier agrees to provide the customer;

accessing an assignment of an item used in producing the product to the first resource;

15 accessing a capacity value representing a capacity of the first resource to process one or more items in a first production period;

accessing a demand value representing a demand placed on the first resource in the first production period by the assignment of the item to the first resource;

20 automatically generating a notification in response to a circumstance selected from the group consisting of:

the requested capacity value being different than the committed capacity value;

25 the requested capacity value exceeding the contracted capacity value;

the capacity value being different than the estimated capacity value; and

the capacity value exceeding the demand value;

automatically communicating the notification to a user associated with the customer, the user associated with the supplier, and the user associated with the factory; and

30 allowing at least one of the users to resolve the circumstance in response to the notification.

47. Software for resource capacity collaboration, the software being embodied in at least one computer-readable medium and when executed operable to:

- access an estimated capacity value representing a customer-estimated capacity of a first resource of a factory used in producing a product for the customer, the first resource operable to perform at least one processing step in producing the product;
- 5 access a contracted capacity value representing a maximum capacity of the first resource that the customer is allowed to request;
- access a requested capacity value representing a capacity of the first resource requested by the customer to be used in producing the product for the customer;
- 10 access a committed capacity value representing a capacity of the first resource that at least one of a user associated with the factory and a user associated with a supplier agrees to provide the customer;
- access an assignment of an item used in producing the product to the first resource;
- 15 access a capacity value representing a capacity of the first resource to process one or more items in a first production period;
- access a demand value representing a demand placed on the first resource in the first production period by the assignment of the item to the first resource;
- automatically generate a notification in response to a circumstance selected
- 20 from the group consisting of:
 - the requested capacity value being different than the committed capacity value;
 - the requested capacity value exceeding the contracted capacity value;
 - the capacity value being different than the estimated capacity value;
- 25 and
 - the capacity value exceeding the demand value;
- automatically communicate the notification to a user associated with the customer, the user associated with the supplier, and the user associated with the factory; and
- 30 allow at least one of the users to resolve the circumstance in response to the notification.

48. A system for resource capacity collaboration, comprising:

a memory operable to store:

an estimated capacity value representing a customer-estimated capacity of a first resource of a factory used in producing a product for the customer, the first resource operable to perform at least one processing step in producing the product;

5 a contracted capacity value representing a maximum capacity of the first resource that the customer is allowed to request;

a requested capacity value representing a capacity of the first resource requested by the customer to be used in producing the product for the customer;

10 a committed capacity value representing a capacity of the first resource that at least one of a user associated with the factory and a user associated with a supplier agrees to provide the customer;

an assignment of an item used in producing the product to the first resource;

15 a capacity value representing a capacity of the first resource to process one or more items in a first production period;

a demand value representing a demand placed on the first resource in the first production period by the assignment of the item to the first resource;

one or more processors collectively operable to:

20 automatically generate a notification in response to a circumstance selected from the group consisting of the requested capacity value being different than the committed capacity value, the requested capacity value exceeding the contracted capacity value, the capacity value being different than the estimated capacity value, and the capacity value exceeding the demand value;

25 automatically communicate the notification to a user associated with the customer, the user associated with the supplier, and the user associated with the factory; and

allow at least one of the users to resolve the circumstance in response to the notification.